

Appendix Table A3. Late Symptoms during the Past Six Months among Gynaecological Cancer Survivors Treated with Pelvic Radiation Therapy with or without Surgery and Control Women, all symptoms

	Survivors <i>N</i> =616 (%)	Controls <i>N</i> =344 (%)	Survivors vs. Controls Age adjusted RR (95% CI)	RT with Surgery <i>N</i> =549 (%)	RT with Surgery vs. Controls Age adjusted RR (95% CI)	RT without Surgery <i>N</i> = 67 (%)	RT without Surgery vs. Controls Age adjusted RR (95% CI)
<i>Anal-sphincter symptoms</i>							
Emptying of all stools into clothing without forewarning at least occasionally	70/606 (12)	3/344 (0.9)	12.7 (4.0-40.3)	55/546 (10)	8.8 (2.8-28.3)	15/60 (25)	30.3 (9.1-101.1)
Leakage of loose stools while awake at least occasionally	199/608 (33)	18/344 (5)	6.0 (3.7-9.6)	171/545 (31)	5.5 (3.4-8.8)	28/63 (44)	8.5 (5.0-14.5)
Leakage of loose stools while asleep at least occasionally	72/611 (12)	8/343 (2)	5.5 (2.6-11.4)	58/548 (11)	4.4 (2.1-9.2)	14/63 (22)	9.8 (4.3-22.4)
Anal leakage of mucus while asleep at least occasionally	32/607 (5)	4/344 (1)	4.9 (1.7-14.1)	25/545 (5)	3.3 (1.1-9.4)	7/62 (11)	9.7 (2.9-32.3)
Leakage of solid stools while awake at least occasionally	46/607 (8)	5/344 (1)	4.4 (1.7-11.0)	37/544 (7)	3.4 (1.4-8.7)	9/63 (14)	9.3 (3.2-27.0)
Faecal leakage without forewarning despite previous defaecation at least occasionally	188/605 (31)	23/344 (7)	4.2 (2.8-6.4)	168/545 (31)	3.9 (2.6-6.0)	20/60 (33)	4.8 (2.8-8.2)
Defaecation urgency with fecal leakage at least occasionally	298/603 (49)	42/343 (12)	4.0 (3.0-5.4)	262/541 (48)	3.8 (2.8-5.2)	36/62 (58)	4.8 (3.3-6.8)
Foul smelling flatulence at least once a week	116/602 (19)	22/343 (6)	3.7 (2.4-5.8)	102/541 (19)	3.8 (2.4-5.9)	14/61 (23)	3.6 (2.0-6.7)
Anal leakage of mucus while awake at least occasionally	87/603 (14)	14/343 (4)	3.5 (2.0-6.1)	76/542 (14)	3.2 (1.8-5.6)	11/61 (18)	4.1 (1.9-8.6)
Self-perception of faecal odor at least occasionally	108/606 (18)	18/340 (5)	3.3 (2.0-5.4)	95/544 (17)	3.1 (1.9-5.2)	13/62 (21)	4.0 (2.1-7.8)
Anal leakage of blood while asleep at least occasionally	9/608 (1)	2/343 (0.5)	2.7 (0.6-12.7)	8/546 (1)	2.7 (0.5-13.1)	1/62 (2)	2.9 (0.3-29.4)
Involuntary flatulence at least once a week	127/606 (21)	33/343 (10)	2.4 (1.7-3.5)	111/545 (20)	2.3 (1.5-3.3)	16/61 (26)	2.8 (1.7-4.8)
Unwanted defaecation while emptying bladder at least occasionally	238/603 (39)	57/342 (17)	2.4 (1.9-3.2)	213/541 (39)	2.4 (1.8-3.1)	25/62 (40)	2.3 (1.6-3.4)
Anal leakage of blood while awake at least occasionally	42/608 (7)	12/343 (4)	2.0 (1.1-3.9)	37/545 (7)	2.0 (1.0-3.9)	5/63 (8)	2.2 (0.8-6.7)
Involuntary loud flatulence at least occasionally	359/607 (59)	150/344 (44)	1.4 (1.2-1.6)	314/546 (58)	1.3 (1.1-1.5)	45/61 (74)	1.7 (1.4-2.1)
Anal pain at least occasionally	129/608 (21)	64/343 (19)	1.2 (0.9-1.6)	116/548 (21)	1.2 (0.9-1.6)	13/60 (22)	1.2 (0.7-2.0)
Pruritus ani at least occasionally	200/609 (33)	114/343 (33)	1.0 (0.9-1.3)	176/547 (32)	1.0 (0.8-1.2)	24/62 (39)	1.2 (0.8-1.7)
Leakage of solid stools while asleep at least occasionally	15/611 (2)	0/344 (0)	-	12/548 (2)	-	3/63 (5)	-
<i>Bowel symptoms</i>							
Defaecation urgency at least once a week	175/602 (29)	19/341 (6)	5.7 (3.5-9.1)	157/542 (29)	5.7 (3.5-9.1)	18/60 (30)	6.0 (3.3-10.8)
Protracted abdominal pain lasting more than 1 year, yes	69/593 (12)	15/339 (4)	3.2 (1.9-5.6)	59/532 (11)	3.1 (1.7-5.5)	10/61 (16)	3.8 (1.8-7.9)
Loose stools at least once a week	234/602 (39)	48/344 (14)	3.0 (2.2-3.9)	205/540 (38)	2.9 (2.1-3.9)	29/62 (47)	3.5 (2.4-5.1)
Abdominal pain and vomiting at least occasionally	60/605 (10)	13/344 (4)	2.6 (1.4-4.7)	49/545 (9)	2.2 (1.2-4.1)	11/60 (18)	4.8 (2.2-10.1)
Mucus in stools at least occasionally	156/607 (26)	45/343 (13)	2.1 (1.5-3.0)	143/545 (26)	2.2 (1.6-3.0)	13/62 (21)	1.6 (0.9-2.8)
Abdominal bloating at least once a week	147/605 (24)	60/342 (18)	1.8 (1.4-2.3)	129/544 (24)	1.8 (1.3-2.3)	18/61 (30)	1.8 (1.1-2.7)
Rectal bleeding at least occasionally	103/604 (17)	42/341 (12)	1.6 (1.1-2.2)	92/545 (17)	1.6 (1.2-2.4)	11/59 (19)	1.5 (0.8-2.8)
Abdominal pain and stools at least occasionally	198/602 (33)	79/343 (23)	1.6 (1.3-2.0)	171/541 (32)	1.5 (1.2-1.9)	27/61 (44)	2.0 (1.4-2.8)

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<i>Bowel symptoms continued</i>							
Abdominal pain at least occasionally	307/604 (51)	137/340 (40)	1.4 (1.2-1.6)	272/544 (50)	1.4 (1.2-1.6)	35/60 (58)	1.5 (1.2-1.9)
Abdominal pain and bloating at least occasionally	228/603 (38)	106/340(31)	1.4 (1.2-1.7)	199/542 (37)	1.4 (1.2-1.7)	29/61 (48)	1.6 (1.2-2.1)
Incomplete bowel emptying at least occasionally	296/609 (49)	152/340 (45)	1.1 (1.0-1.3)	273/549 (50)	1.2 (1.0-1.4)	23/60 (38)	0.9 (0.6-1.2)
Ability to exert strain at stool, at least moderately good	187/604 (31)	108/338 (32)	1.0 (0.8-1.2)	176/543 (32)	1.1 (0.9-1.3)	11/61 (18)	0.6 (0.3-1.0)
Hard stools at least once a week	40/608 (7)	32/344 (9)	0.7 (0.5-1.2)	38/546 (7)	0.8 (0.5-1.3)	2/62 (3)	0.3 (0.1-1.4)
<i>Urinary tract symptoms</i>							
Difficulty feeling the need to empty bladder at least occasionally	56/604 (9)	11/343 (3)	2.8 (1.5-5.4)	46/544 (8)	2.5 (1.3-5.0)	10/60 (17)	5.1 (2.3-11.3)
Difficulty emptying bladder at least occasionally	49/602 (8)	11/343 (3)	2.7 (1.4-5.2)	43/542 (8)	2.7 (1.4-5.5)	6/60 (10)	3.2 (1.3-8.4)
Difficulty feeling full bladder at least occasionally	90/602 (15)	18/342 (5)	2.7 (1.6-4.5)	76/543 (14)	2.4 (1.4-4.1)	14/59 (24)	4.5 (2.4-8.4)
Haematuria at least occasionally	20/606 (3)	5/344 (1)	2.5 (0.9-6.9)	16/546 (3)	2.4 (0.8-6.8)	4/60 (7)	5.0 (1.4-17.8)
Straining to initiate emptying of bladder at least occasionally	77/605 (13)	21/343 (6)	2.2 (1.4-3.7)	68/545 (12)	2.4 (1.5-3.9)	9/60 (15)	2.5 (1.2-5.3)
Painful emptying of bladder at least occasionally	60/605 (10)	20/341 (6)	2.0 (1.2-3.3)	52/545 (10)	1.9 (1.1-3.3)	8/60 (13)	2.3 (1.1-5.0)
Urinary incontinence without urinary urgency at least occasionally	88/603 (15)	24/342 (7)	1.8 (1.2-2.9)	81/543 (15)	1.9 (1.2-3.0)	7/60 (12)	1.6 (0.7-3.6)
Night-time emptying of bladder at least twice per night or more, yes	222/607 (37)	58/341 (17)	1.8 (1.4-2.4)	199/548 (36)	1.8 (1.4-2.4)	23/59 (39)	2.2 (1.5-3.2)
Need of antibiotics due to urinary tract infection twice or more, yes	93/605 (15)	31/344 (9)	1.6 (1.1-2.3)	86/545 (16)	1.7 (1.1-2.5)	7/60 (12)	1.3 (0.6-2.9)
Urinary incontinence due to urinary urgency at least occasionally	209/607 (34)	66/342 (19)	1.6 (1.2-2.0)	186/545 (34)	1.5 (1.2-2.0)	23/62 (37)	1.8 (1.2-2.7)
Slow emptying of bladder at least occasionally	122/605 (20)	47/344 (14)	1.6 (1.2-2.2)	106/546 (19)	1.5 (1.1-2.2)	16/59 (27)	2.0 (1.2-3.3)
Self-perception of urine odor at least occasionally	149/605 (25)	62/341(18)	1.4 (1.1-1.9)	126/544 (23)	1.3 (1.0-1.8)	23/61 (38)	2.1 (1.4-3.0)
Urinary urgency at least occasionally	346/605 (57)	139/343 (41)	1.3 (1.1-1.5)	308/544 (57)	1.3 (1.1-1.5)	38/61 (62)	1.5 (1.2-1.8)
Feeling of incomplete bladder emptying at least occasionally	232/604 (38)	101/343 (29)	1.3 (1.1-1.6)	203/544 (37)	1.3 (1.0-1.6)	29/60 (48)	1.6 (1.2-2.2)

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<i>Symptoms related to sexuality</i>							
Protracted genital pain lasting for more than 1 year yes	28/593 (5)	4/339 (1)	5.0 (1.7-14.5)	21/532 (4)	4.3 (1.4-13.0)	7/61 (11)	9.6 (2.9-31.8)
Genital bleeding during or after intercourse at least once, yes	54/585 (9)	13/329 (4)	3.7 (2.1-6.7)	45/523 (9)	3.6 (2.0-6.7)	9/62 (15)	3.9 (1.8-8.4)
Deep dyspareunia when having intercourse, at least a little	101/583 (17)	23/330 (7)	3.7 (2.4-5.7)	90/521 (17)	3.7 (2.4-5.8)	11/62 (18)	3.0 (1.6-5.7)
Vaginal lubrication when sexually aroused, no	39/577 (7)	7/333 (2)	2.9 (1.3-6.4)	37/517 (7)	2.9 (1.3-6.5)	2/60 (3)	1.6 (0.3-7.5)
Decreased ability for intercourse leading to lower intercourse frequency, at least a little	176/575 (31)	37/327 (11)	2.9 (2.1-4.1)	160/515 (31)	2.9 (2.0-4.0)	11/60 (27)	2.5 (1.5-4.1)
Vaginal elasticity, no	172/502 (34)	41/302 (14)	1.8 (1.3-2.4)	148/451 (33)	1.6 (1.2-2.2)	24/51 (47)	2.5 (1.7-3.7)
Genital swelling when sexually aroused, no	82/571 (14)	35/327 (11)	1.5 (1.0-2.2)	72/512 (14)	1.5 (1.0-2.2)	10/59 (17)	1.6 (0.9-3.1)
Superficial dyspareunia when having intercourse, at least a little	140/584 (24)	67/330 (20)	1.5 (1.2-2.0)	125/523 (24)	1.5 (1.1-2.0)	15/61 (25)	1.4 (0.8-2.2)
Sexual arousal in a sexual situation, no	55/578 (10)	20/331 (6)	1.3 (0.8-2.1)	50/516 (10)	1.3 (0.8-2.2)	5/62 (8)	1.3 (0.5-3.2)
Sensitivity to touch inside vagina, no	221/540 (41)	65/310 (21)	1.3 (1.0-1.6)	192/485 (40)	1.2 (1.0-1.5)	29/55 (53)	1.7 (1.3-2.2)
Sensitivity to touch of labia and clitoris, no	186/558 (33)	61/320 (19)	1.2 (0.9-1.5)	163/501 (33)	1.1 (0.9-1.4)	23/57 (40)	1.5 (1.1-2.1)
Chafing of labia, yes	117/573 (20)	71/329 (22)	1.1 (0.8-1.4)	103/514 (20)	1.1 (0.8-1.4)	14/59 (24)	1.2 (0.7-1.9)
Orgasm, no	294/565 (52)	98/323 (30)	1.1 (1.0-1.3)	265/507 (52)	1.1 (0.9-1.3)	29/58 (50)	1.1 (1.0-1.4)
<i>Pelvic bone symptoms</i>							
Pubic pain when walking indoors at least occasionally	46/603 (8)	6/343 (2)	4.9 (2.1-11.6)	35/542 (6)	4.1 (1.7-10.2)	11/61 (18)	10.3 (4.0-26.7)
Pubic pain when walking outdoors 500 m at least occasionally	42/596 (7)	7/343 (2)	3.7 (1.7-8.4)	34/536 (6)	3.3 (1.4-7.7)	8/60 (13)	6.6 (2.5-17.5)
Pubic pain, yes	67/603 (11)	12/339 (4)	3.4 (1.9-6.4)	53/544 (10)	3.0 (1.6-5.7)	14/59 (24)	7.0 (3.5-14.2)
Protracted hip pain lasting for more than 1 year, yes	144/593 (24)	65/339 (19)	1.2 (0.9-1.5)	127/521 (24)	1.1 (0.8-1.5)	17/61 (28)	1.5 (1.0-2.3)
Hip pain when walking indoors at least occasionally	191/598 (32)	97/341 (28)	1.1 (0.9-1.3)	167/538 (31)	1.0 (0.8-1.3)	24/60 (40)	1.4 (1.0-2.0)
Protracted back pain lasting for more than 1 year, yes	180/593 (30)	96/339 (28)	1.1 (0.9-1.3)	161/532 (30)	1.1 (0.8-1.3)	19/61 (31)	1.1 (0.7-1.6)
Hip pain, yes	212/599 (35)	113/343 (33)	1.0 (0.8-1.2)	182/538 (34)	0.9 (0.8-1.2)	30/61 (49)	1.5 (1.1-2.0)
Hip pain when walking outdoors 500 m at least occasionally	193/598 (32)	102/340 (30)	1.0 (0.8-1.3)	165/536 (31)	1.0 (0.8-1.2)	28/62 (45)	1.5 (1.1-2.0)
Protracted joint pain lasting for more than 1 year, yes	126/593 (21)	64/339 (19)	1.0 (0.8-1.4)	113/532 (21)	1.0 (0.8-1.4)	13/61 (21)	1.1 (0.7-1.9)

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<i>Pelvic bone symptoms continued</i>							
Sacral pain when walking outdoors 500 m at least occasionally	190/584 (33)	119/343 (35)	0.9 (0.7-1.1)	166/524 (32)	0.9 (0.7-1.1)	24/60 (40)	1.1 (0.8-1.6)
Sacral pain, yes	232/600 (39)	179/344 (52)	0.8 (0.7-0.9)	196/539 (36)	0.7 (0.6-0.8)	36/61 (59)	1.1 (0.9-1.4)
Sacral pain when walking indoors at least occasionally	194/593 (33)	134/342 (39)	0.8 (0.7-1.0)	166/531 (31)	0.8 (0.6-1.0)	28/62 (45)	1.2 (0.9-1.6)
<i>Lower abdomen and leg symptoms</i>							
Erysipelas on abdomen or legs, yes	17/597 (3)	3/336 (1)	3.6 (1.0-12.8)	14/537 (3)	4.0 (1.1-14.5)	3/60 (5)	5.2 (1.1-25.1)
Lower abdominal heaviness at least occasionally	119/600 (20)	38/344 (11)	2.1 (1.5-3.0)	101/540 (19)	2.1 (1.4-3.0)	18/60 (30)	2.7 (1.7-4.5)
Pain in lower abdomen in connection with edema at least occasionally	92/607 (15)	33/343 (10)	1.9 (1.3-2.8)	75/546 (14)	1.7 (1.1-2.6)	17/61 (28)	3.0 (1.8-5.0)
Leg pain in connection with edema at least occasionally	164/606 (27)	54/342 (16)	1.7 (1.3-2.3)	145/545 (27)	1.7 (1.2 (2.2)	19/61 (31)	2.0 (1.3-3.2)
Swollen lower abdomen at least occasionally	121/599 (20)	51/342 (15)	1.7 (1.3-2.4)	106/538 (20)	1.8 (1.3-2.5)	15/61 (25)	1.7 (1.0-2.8)
Protracted leg pain lasting more than 1 year, yes	134/593 (21)	48/339 (14)	1.5 (1.1-2.1)	115/532 (22)	1.4 (1.0-2.0)	19/61 (31)	2.2 (1.4-3.4)
Swollen legs at least occasionally	218/606 (36)	94/344 (27)	1.4 (1.1-1.7)	197/546 (36)	1.4 (1.1-1.9)	21/60 (35)	1.4 (0.9-2.0)
Heavy legs at least occasionally	210/606 (35)	97/344 (28)	1.1 (1.1-1.6)	186/546 (34)	1.3 (1.0-1.6)	24/60 (40)	1.4 (1.0-2.1)

Abbreviations: RR = relative risk; CI = confidence interval; RT = radiation therapy

The symptoms are sorted into anatomical region of supposed origin and in size order for relative risk, the number in the denominator may vary due to missing information